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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,498	02/24/2004	Seifollah S. Nanaji	2400-725B	9920
27820	7590	09/22/2004	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C. P.O. BOX 1287 CARY, NC 27512			HUYNH, KHOA D	
			ART UNIT	PAPER NUMBER
			3751	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,498

Applicant(s)

NANAJI, SEIFOLLAH S. 

Examiner

Khoá D. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69-81 and 98-111 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 69-81 and 98-111 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pump connected inline to the conduit downstream said valve outlet as recited in claim 69 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 69-81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 69, it is unclear what structural limitation applicant intends to cover when claim 69 calls for "a pump connected inline to the conduit downstream said valve outlet". Such limitation renders the claim indefinite since it does not have any clear support in the instant specification.

Claims 70-81 depend on claim 69 and are likewise indefinite.

Regarding claims 77 and 79, it is unclear what structural limitation applicant intends to cover when claims 77 and 79 call for "said electronic

controller activates said pump". Such limitation renders the claim indefinite since it does not have any clear support in the instant specification. Claim 78 and 80 depend on claims 77 and 79, respectively, and are likewise indefinite.

Regarding claim 81, it is unclear what structural limitation applicant intends to cover when claim 81 calls for "said electronic controller deactivates said pump". Such limitation renders the claim indefinite since it does not have any clear support in the instant specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 98 and 99, as presently understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Pettazzoni et al. (5878792).

The Pettazzoni et al. reference discloses a vapor recovery method during a refueling of a vehicle. The method includes recovering vapors expelled from the vehicle during refueling, passing the vapors through a return passage (15) and through a condenser or heat exchanger (at 3) to cool the vapors, and return the vapor to the underground tank (22) via the passage (shown as dotted lines).

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Regarding claim 99, the method further includes a step of opening a valve (21 is capable of acting as a valve) inline to the vapor return passage to allow vapor to pass through the heat exchanger.

6. Claims 69, 70 and 98-100, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by MacDowell et al. (6302165).

Regarding claim 69, the MacDowell et al. reference discloses a vapor recover system for returning the vapor recovered, during the refueling of a vehicle, to the underground storage tank (Fig. 2). The system includes an underground storage tank (12), a conduit (the line begins at about 52 and ends at about the arrow point of line 44) having an inlet port (at 52), and an outlet port connected to the underground tank (see the arrow connection). A fuel dispenser having a nozzle (at 14), a hose connected to the nozzle, a fuel delivery line coupled to the hose, a vapor pump (20), a vapor return line (at 48) contained within the hose and connected to the inlet port of the conduit via the pump, a valve (at 64) connected inline to the conduit and having an inlet and an outlet, a pump (at 32) and a condenser or heat exchanger (at 68) connected inline to the conduit downstream of the valve, and an electronic controller (at 46) electrically coupled to the valve and the vapor pump, wherein the controller is adapted to control the opening of the valve and the activation of the vapor pump to recover vapor expelled from the vehicle tank during refueling to pass vapor through the inlet port, through the heat exchanger to cool the vapor and return the vapor to the underground storage tank.

Regarding claim 70, a second valve (at 34, the pump is capable of functioning as a valve to allow the flow of fluid) coupled inline to the conduit downstream of the outlet of the heat exchanger.

Regarding claims 98-100, the method as claimed would be inherent during the normal use and operation of the MacDowell et al. device.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 71, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over MacDowell et al. (6302165) in view of Leblanc (5067327).

The MacDowell et al. reference DIFFERS in that it does not specifically include a fan to circulate outside air as claimed. Attention, however, is directed to the Leblanc reference which discloses a condenser (about 80, 81) having a fan to circulate ambient air to cool the medium inside the condenser. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the MacDowell et al. heat exchanger by employing a fan in view of the teaching of Leblanc. Such modification would be considered a choice of a cooling medium for a heat exchanger on the basis of its suitability of the intended use, especially since MacDowell et al. also discloses

that the condenser is a conventional heat exchanger such as an air cooler/radiator.

9. Claim 72, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over MacDowell et al. (6302165) in view of Hartsell, Jr. (5803136)

The MacDowell et al. reference DIFFERS in that it does not specifically include a heat exchanger temperature sensor as claimed. Attention, however, is directed to the Hartsell, Jr. reference which discloses an apparatus for reducing pressure in a fuel tank ullage having a heat exchanger (44) and a temperature sensor (29) connected to an electronic controller (12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the MacDowell et al. heat exchanger by employing temperature sensor, in view of the teaching of Hartsell, Jr., in order to measure and monitor the temperature of the vapor leaving the heat exchanger.

10. Claims 73 and 75, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDowell et al. (6302165) in view of Nanaji (5755854).

Regarding claim 73, the MacDowell et al. reference also DIFFERS in that it does not specifically include an ullage temperature sensor as claimed.

Attention, however, is directed to the Nanaji reference which discloses another apparatus for reducing pressure in a fuel tank ullage. The apparatus includes a temperature sensor (about 24) connected to an electronic controller (20) for indicating the temperature in the ullage (about 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to have modified the MacDowell device by employing an ullage temperature sensor, in view of the teaching of Nanaji, to measure the temperature in the ullage.

Regarding claim 75, the MacDowell et al. reference also DIFFERS in that it does not specifically include an ambient pressure sensor as claimed. Attention, however, is also directed to the Nanaji reference which discloses an apparatus for reducing pressure in a fuel tank ullage. The apparatus includes an ambient pressure sensor (about 25) connected to an electronic controller (20) for indicating the atmospheric pressure. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the MacDowell et al. device by employing an ambient pressure sensor, in view of the teaching of Nanaji, since such ambient pressure can be used as a preference point for comparison to the pressure in the tank ullage.

11. Claim 74, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over MacDowell et al. (6302165) in view of Nanaji (6302165).

The MacDowell et al. reference DIFFERS in that it does not specifically include an ambient temperature sensor as claimed. Attention, however, is directed to the Nanaji ('165) reference which discloses another apparatus for reducing pressure in a fuel tank ullage. The apparatus includes an ambient temperature sensor (about 63) electrically coupled to a controller (about 50) for indicating the atmospheric temperature. Therefore, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to have modified the MacDowell et al. apparatus by employing an ambient temperature sensor, in view of the teaching of Nanaji ('165), since such ambient temperature can be used as a preference point for comparison to the temperature in the tank ullage.

12. Claims 76-78, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDowell et al. (6302165) in view of Nanaji (5843212).

Regarding claim 76, the MacDowell et al. reference DIFFERS in that it does not specifically include a storage tank pressure sensor as claimed. Attention, however, is directed to the Nanaji ('212) reference which discloses another apparatus for reducing pressure in a fuel tank ullage. The apparatus includes a storage pressure sensor (at 23) electrically coupled to a controller (about 12) for indicating the pressure inside the storage tank. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the MacDowell et al. apparatus by employing a storage tank pressure sensor, in view of the teaching of Nanaji ('212), since such pressure can be used as a preference point for comparison to the pressure outside the tank ullage.

Regarding claims 77 and 78, the modified MacDowell et al. controller controls the activation of the valve, pump and heat exchanger in accordance with the inputs of the sensors.

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13. Regarding claims 101-111, the method as claimed would be inherent during the normal use and operation of the modified MacDowell et al. device as discussed in the above rejections.

Allowable Subject Matter

14. Claims 79-81 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoa D. Huynh whose telephone number is (703) 306-5483. The examiner can normally be reached on M-F (7:00-4:30) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (703) 308-2580. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Khoa D. Huynh', with a horizontal line underneath.

Khoa D. Huynh
Patent Examiner
Art Unit 3751

HK
09/20/04